

Human Performance (BIG) DATA specification



*platform &
content agnostic*



Experience API (xAPI)

<https://ADLnet.gov> • <https://xapi.adlnet.gov>

WHAT'S AN API?

An Application Programming Interface (API) is a set of programming instructions and standards that allow web-based applications to “talk” (pass data) to each other without any user intervention.

WHAT'S EXPERIENCE API (xAPI)?

xAPI lets applications share data about human performance (broadly defined). More precisely, xAPI lets you capture (big) data on human performance, along with associated instructional content or performance context information (i.e., *experience*). xAPI applies “activity streams” to tracking data and provides sub-APIs to access and store information about state and content. This enables nearly dynamic tracking of activities from any platform or software system—from traditional Learning Management Systems to mobile devices, simulations, wearables, physical beacons, and more.

Q: WHAT CAN I TRACK WITH xAPI?

A: Track micro-behaviors, state, and context, such as...

- Reading an article or interacting with an **eBook**
- Watching a training **video**, stopping and starting it
- Training data from a **simulation**
- Performance in a **mobile app**
- **Chatting** with a mentor
- **Physiological measures**, such as heart-rate data
- Micro-interactions with **e-learning content**
- **Team performance** in a multi-player serious game
- Quiz scores and **answer history** by question
- **Real-world performance** in an operational context
- *Anything!*

WHY xAPI?

- Track any experience (formal, informal, or operational)
- Platform and subject-matter agnostic
- Built upon RESTful and JSON (so it's lightweight)
- Human (and machine) readable
- * 100% free—no licensing fees or vendor lock-in
- Open source and community maintained

GET INVOLVED

xAPI is maintained by ADL and several Communities of Practice. Current efforts include **extending verb vocabularies** to establish controlled lexicons for the semantic xAPI terminology, adding **xAPI Profiles** to help identify what data to collect, and integrating **competency frameworks**. Become a member, or download, contribute to, and use any of our 20+ open source projects on GitHub. <http://adlnet.github.io/#xapi>

FREQUENTLY ASKED QUESTIONS

Q: What about SCORM?

A: xAPI is sometimes called the first step to the “next-gen SCORM” because it's designed to achieve similar goals (e.g., interoperability). But where SCORM works primarily with learning management systems, xAPI supports more diverse platforms. Technically, SCORM isn't replaced by xAPI, and for legacy systems, the two can work together.

Q: What's Tin Can?

A: xAPI was developed via a research effort called “Project Tin Can.” When officially released, the specification was dubbed “xAPI,” but by that time, some people already knew the spec by its original codename. We prefer to use the official name, “xAPI,” but you'll still find some organizations that call it “Tin Can API.”

Q: What about cmi5?

A: The cmi5 specification defines how learning content is imported, launched, and tracked between xAPI and (legacy) learning management systems. Think of cmi5 as a protocol or template for xAPI. Since April 2015, ADL has officially taken over the cmi5 specification and is working with the community to develop an xAPI + cmi5 use-case.

CONTACT US FOR MORE INFORMATION

Advanced Distributed Learning Initiative

www.adlnet.gov | Located in Alexandria, VA and Orlando, FL

Technical Contact: Jonathan Poltrack, jonathan.poltrack.ctr@adlnet.gov

